

**REMARKS**

Favorable reconsideration and allowance of this application are requested in view of the comments below.

As a procedural note, the present amendment is being filed concurrently with a formal Request for Continued Examination (RCE) under 37 CFR §1.114. Accordingly withdrawal of the "finality" of the October 5, 2006 Official Action is in order so as to allow entry and consideration of the amendments and remarks presented herewith.

Independent claims 1 and 5 have been amended so as to emphasize that the "matrix material" is a polyurethane having 100% modulus of at least 3 MPa. Support for such an expression may be found throughout the originally filed specification, for example, at page 5, line 34 through page 6, lines 10 and by original claims 1 and 2. The remaining pending claims have been amended so as to be commensurate with claim 2 being cancelled as redundant.

Thus, claims 1 and 3-6 remain pending in this application for which favorable reconsideration and allowance are requested.

The only issues remaining to be resolved in this application are the rejections of claims 2-6 as allegedly unpatentable under 35 USC §103(a) over the WO '766 publication in view of Li et al, and the rejection of claims 5-6 as allegedly anticipated by the WO '766 publication.<sup>1</sup> Applicants suggest that neither the WO '766 publication nor Li et al is an appropriate reference against the claims pending herein for consideration.

As was noted during prior prosecution, the present invention provides for improvements in the specific energy absorption (SEA) at elevated temperatures (e.g., 80°C) of a ballistic-resistant moulded article comprising a stack of monolayers. Such

SEA improvement is achieved according to the present invention by employing a polyurethane matrix material for the highly oriented fibers which has a 100% modulus of at least 3 MPa and compressing the stack of monolayers at a pressure of more than 25 MPa and a temperature between 125 and 150°C.

The inventions as defined by independent claims 1 and 5 are not anticipated by the WO '766 publication. Specifically, the WO '766 publication merely exemplifies the use of KRATON<sup>®</sup> styrene-isoprene-styrene triblock copolymer as the matrix material. However, as noted on page 7, lines 21-24, the modulus of KRATON<sup>®</sup> copolymer as matrix material is only 1.4 MPa – *not* at least 3 MPa as required by independent claim 1. Moreover, the WO '766 publication does not teach the skilled person that the stack must be compressed at a pressure of more than 25 MPa and at a temperature between 125 and 150°C in order to achieve improved SEA at elevated temperatures.

With respect to each of independent claims 1 and 5, it will be noted that the matrix material is required to be polyurethane which has a 100% modulus of at least 3 MPa. (See the Examples wherein the polyurethane employed has a modulus of 6 MPa.)

Consequently, claims 1 and 5-6 are not anticipated by the WO '766 publication.

Nor does Li et al render obvious the present invention when combined with the WO '766 publication. In this regard, like the WO '766 publication, Li et al discloses the use of KRATON<sup>®</sup> copolymer as matrix material. Again, KRATON<sup>®</sup> copolymer does *not* have a 100% modulus of *at least 3 MPa* as required of the polyurethane matrix material defined by the pending claims herein. Nor does Li et al teach towards the use of polyurethane matrix materials having a 100% modulus of at least 3 MPa. Li et al does not even relate to the issue of improving ballistic performance at elevated temperatures

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<sup>1</sup> The amendment to claim 1 is suggested to have rendered moot the other rejection advanced by the Examiner against claim 1 alone as allegedly being anticipated by the WO '766 publication.

(e.g., 80°C). Thus, Li et al would not lead the ordinarily skilled person to the presently claimed invention in view of the WO '766 publication. Specifically, even if the WO '766 publication and Li et al were combined, the present invention would not result.

The Examiner is again invited to review the results of the Examples and Comparative Examples in the originally filed specification. In this regard, the data show that unexpected anti-ballistic performance at elevated temperature (e.g., 80°C) ensues for products within the scope of the present invention which is far superior to comparable products which employ the prior art KRATON® copolymer as a matrix material and/or employ a compression pressure of less than 25 MPa and a compression temperature of 125°C. (Please compare in this regard the data of Examples I-X to the data of Comparative Examples A-D in Table 1 on page 8 of the originally filed specification.

Hence, the present invention selectively achieves improved SEA properties at elevated temperatures by use of a polyurethane matrix material having a 100% modulus of at least 3 MPa and by compressing the stack of monolayers at a pressure of more than 25 MPa and a temperature between 125 and 150°C.

In response to the Examiner's contention that the prior claims did not contain a reference to a polyurethane matrix material having a 100% modulus of at least 3 MPa, the claims as amended above now include such a recitation.

The Examiner further asserts that "...article limitations are not given patentable weight unless it manipulatively affect (sic) said process." In this regard, the presently claimed process involves employing a *specific* type of matrix material – i.e., a polyurethane – having *specific* properties – i.e., a 100% modulus of at least 3 MPa, for stacks of oriented fibres which are thereafter compressed at a pressure of more than 25 MPa and a temperature of between 125 and 150°C. These are recitations that cannot knowingly be disregarded when reviewing the patentability of the present invention.

JACOBS et al  
Serial No. 10/532,807  
March 5, 2007

Finally, the Examiner asserts that "...it is well known in the art to select particular material on the basis of suitability." With all respect due to the Examiner, the art applied against the claims do not provide any *selection* at all for the matrix material. Instead, as noted above, the only "selection" that the WO '766 publication and Li provide is for a matrix material of KRATON<sup>®</sup> copolymer which has a modulus of substantially less than 3.0. Thus, contrary to the Examiner's assertion the art applied against the pending claims most certainly does not suggest at all employing a polyurethane matrix material having a 100% modulus of at least 3 MPa.

For the reasons noted above, applicants suggest that the rejections advanced against prior pending claims 1-6 under 35 USC §§102(b) and 103(a) in the subject Official Action should be withdrawn. Such favorable action is therefore solicited.

Respectfully submitted,

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